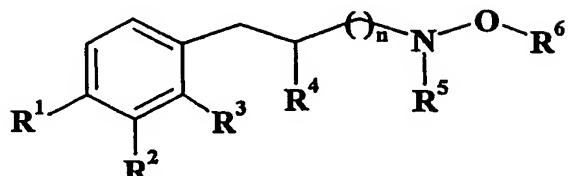


**CLAIMS**

## 1. Use of a compound of general formula (I):



(I)

wherein:

n is 0, 1 or 2;

R<sup>1</sup> and R<sup>2</sup>, independently of each other, are H, OH or OCH<sub>3</sub>;R<sup>3</sup> is H or CH<sub>3</sub>;

10 R<sup>4</sup> is H, C<sub>1</sub>-C<sub>3</sub> straight or branched alkyl or, together with R<sup>3</sup>, forms a five to seven-membered carbocyclic ring;  
 and R<sup>5</sup> and R<sup>6</sup>, independently of each other, are H or C<sub>1</sub>-C<sub>5</sub> straight or branched alkyl

15 for the preparation of pharmaceutical compositions for the prevention and treatment of central and peripheral nervous system disorders involving protein misfolding or misaggregation of beta-amyloid peptides, alpha synuclein, prion protein and huntingtin.

2. Use according to claim 1 wherein the central and peripheral nervous system diseases are Alzheimer's Disease, Lewy body disease, Parkinson's Disease, spongiform encephalopathies, Huntington's Disease and systemic AA amyloidosis including the primary amyloidosis of the peripheral nervous system and for diagnosis of said disorders.

3. The use according to any one of claims from 1 to 2, wherein the compound is selected from the group consisting of:

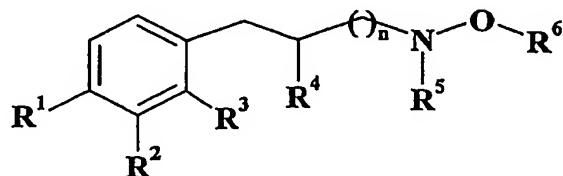
25 • N-(1-methyl-2-(3-hydroxy-phenyl)-ethyl)-O-ethyl-

hydroxylamine;

- N-(1-methyl-2-(3-hydroxy-phenyl)-ethyl)-N-propyl-O-ethyl-hydroxylamine;
- N-(1-methyl-2-(3,4-dihydroxy-phenyl)-ethyl)-hydroxylamine;
- 5      • N-(1-methyl-2-(3,4-dihydroxy-phenyl)-ethyl)-O-ethyl-hydroxylamine;
- N-(1-methyl-2-(3,4-dihydroxy-phenyl)-ethyl)-O-methyl-hydroxylamine;
- N-(1-methyl-2-(3,4-dihydroxy-phenyl)-ethyl)-N-propyl-O-ethyl-hydroxylamine;
- 10     • N-(1-methyl-2-(3-methoxy-phenyl)-ethyl)-O-ethyl-hydroxylamine;
- N-(1-methyl-2-(3-methoxy-phenyl)-ethyl)-N-propyl-O-ethyl-hydroxylamine;
- 15     • N-(1-methyl-2-(3,4-dimethoxy-phenyl)-ethyl)-O-ethyl-hydroxylamine;
- N-(1-methyl-2-(3,4-dimethoxy-phenyl)-ethyl)-N-propyl-O-ethyl-hydroxylamine;

and the pharmaceutically acceptable salts thereof.

20     4. A compound of general formula (I)



(I)

and pharmaceutically acceptable salts or prodrugs thereof, wherein:

n is 0, 1 or 2;

25     R<sup>1</sup> and R<sup>2</sup>, independently of each other, are H, OH or OCH<sub>3</sub>;

$R^3$  is H or  $CH_3$ ;

$R^4$  is H,  $C_1-C_3$  straight or branched alkyl or, together with  $R^3$ , forms a five to seven-membered carbocyclic ring;  
and  $R^5$  and  $R^6$ , independently of each other, are H or  $C_1-C_5$  straight or  
5 branched alkyl

with the provisos that:

$R^1$  and  $R^2$  cannot be both hydrogen;

when n is 0,  $R^1$  and  $R^2$  are both hydroxyl,  $R^3$  and  $R^5$  are hydrogen,  $R^4$  cannot be  $CH_3$ ;

10 when n is 0,  $R^3$  is H and  $R^4$  is H or  $CH_3$ ,  $R^6$  cannot be  $C_1-C_3$  straight or branched alkyl;

and that the compounds cannot be:

- 1-(4-hydroxyphenyl)-2-hydroxylaminoethane,
- 1-(4-hydroxyphenyl)-2-hydroxylaminopropane,
- 15 • 1-(4-methoxyphenyl)-2-hydroxylaminopropane,
- 1-(3,4-dimethoxyphenyl)-2-hydroxylaminopropane,
- 1-(4-methoxyphenyl)-4-hydroxylaminobutane
- 1-(3-methoxyphenyl)-2-hydroxylaminopropane,
- 20 • 1-(3,4-dimethoxyphenyl)-2-hydroxylaminoethane,
- N-methyl-1-(3,4-dihydroxyphenyl)-2-hydroxylaminopropane,
- 1-(3-methoxy-4-hydroxyphenyl)-2-hydroxylaminopropane,
- 25 • N-methyl-1-(3-methoxy-4-hydroxyphenyl)-2-hydroxylaminopropane,
- N-methyl-1-(3,4-dimethoxyphenyl)-2-hydroxylaminopropane.

5. A compound according to claim 4 selected from the group consisting of:

- N-(5-hydroxy-1,2,3,4-tetrahydro-naphthalen-2-yl)-O-methyl-hydroxylamine;

- N-(5-hydroxy-1,2,3,4-tetrahydro-naphthalen-2-yl)-O-ethyl-hydroxylamine;
- N-(5-hydroxy-1,2,3,4-tetrahydro-naphthalen-2-yl)-N-propyl-O-ethyl-hydroxylamine;
- 5 • N-(5-methoxy-1,2,3,4-tetrahydro-naphthalen-2-yl)-O-methyl-hydroxylamine;
- N-(5-methoxy-1,2,3,4-tetrahydro-naphthalen-2-yl)-O-ethyl-hydroxylamine;
- 10 • N-(5-methoxy-1,2,3,4-tetrahydro-naphthalen-2-yl)-N-propyl-O-ethyl-hydroxylamine;
- N-(5,6-dihydroxy-1,2,3,4-tetrahydro-naphthalen-2-yl)-O-methyl-hydroxylamine;
- N-(5,6-dihydroxy-1,2,3,4-tetrahydro-naphthalen-2-yl)-O-ethyl-hydroxylamine;
- 15 • N-(5,6-dihydroxy-1,2,3,4-tetrahydro-naphthalen-2-yl)-N-propyl-O-ethyl-hydroxylamine;
- N-(5,6-dihydroxy-1,2,3,4-tetrahydro-naphthalen-2-yl)-N-butyl-O-ethyl-hydroxylamine;
- N-(5,6-dihydroxy-1,2,3,4-tetrahydro-naphthalen-2-yl)-N-butyl-O-propyl-hydroxylamine;
- 20 • N-(5,6-dimethoxy-1,2,3,4-tetrahydro-naphthalen-2-yl)-O-methyl-hydroxylamine;
- N-(5,6-dimethoxy-1,2,3,4-tetrahydro-naphthalen-2-yl)-O-ethyl-hydroxylamine;
- 25 • N-(5,6-dimethoxy-1,2,3,4-tetrahydro-naphthalen-2-yl)-N-propyl-O-ethyl-hydroxylamine;
- N-(1-methyl-2-(3-hydroxy-phenyl)-ethyl)-hydroxylamine;
- N-(1-methyl-2-(3-hydroxy-phenyl)-ethyl)-N-methyl-

hydroxylamine;

- N-(1-methyl-2-(3-hydroxy-phenyl)-ethyl)-N-propyl-hydroxylamine;
- N-(1-methyl-2-(3,4-dihydroxy-phenyl)-ethyl)-N-propyl-hydroxylamine;
- 5       • N-(1-methyl-2-(3-methoxy-phenyl)-ethyl)-N-methyl-hydroxylamine;
- N-(1-methyl-2-(3-methoxy-phenyl)-ethyl)-N-propyl-hydroxylamine;
- 10      • N-(1-methyl-2-(3,4-dimethoxy-phenyl)-ethyl)-hydroxylamine;
- N-(1-methyl-2-(3,4-dimethoxy-phenyl)-ethyl)-N-propyl-hydroxylamine;
- N-(5-hydroxy-1,2,3,4-tetrahydro-2-naphthalenyl-methyl)-O-ethyl-hydroxylamine;
- 15      • N-(5-methoxy-1,2,3,4-tetrahydro-2-naphthalenyl-methyl)-O-ethyl-hydroxylamine;
- N-(5,6-dihydroxy-1,2,3,4-tetrahydro-2-naphthalenyl-methyl)-O-ethyl-hydroxylamine;
- N-(5,6-dimethoxy-1,2,3,4-tetrahydro-2-naphthalenyl-methyl)-O-ethyl-hydroxylamine;
- 20      • N-(5-hydroxy-1,2,3,4-tetrahydro-2-naphthalenyl-methyl)-N-propyl-O-ethyl-hydroxylamine;
- N-(5-methoxy-1,2,3,4-tetrahydro-2-naphthalenyl-methyl)-N-propyl-O-ethyl-hydroxylamine;
- 25      • N-(5,6-dihydroxy-1,2,3,4-tetrahydro-2-naphthalenyl-methyl)-N-propyl-O-ethyl-hydroxylamine;
- N-(5,6-dimethoxy-1,2,3,4-tetrahydro-2-naphthalenyl-methyl)-N-propyl-O-ethyl-hydroxylamine;

- N-(2-methyl-3-(3,4-dihydroxy-phenyl)-propyl)-hydroxylamine;
- N-(2-methyl-3-(3,4-dihydroxy-phenyl)-propyl)-O-ethyl-hydroxylamine;
- N-(2-methyl-3-(3,4-dihydroxy-phenyl)-propyl)-N-methyl-hydroxylamine;
- N-(2-methyl-3-(3,4-dihydroxy-phenyl)-propyl)-N-propyl-hydroxylamine;
- N-(2-methyl-3-(3,4-dihydroxy-phenyl)-propyl)-N-propyl-O-ethyl-hydroxylamine;
- N-(2-methyl-3-(3,4-dimethoxy-phenyl)-propyl)-hydroxylamine;
- N-(2-methyl-3-(3,4-dimethoxy-phenyl)-propyl)-O-ethyl-hydroxylamine;
- N-(2-methyl-3-(3,4-dimethoxy-phenyl)-propyl)-N-methyl-hydroxylamine;
- N-(2-methyl-3-(3,4-dimethoxy-phenyl)-propyl)-N-propyl-hydroxylamine;
- N-(2-methyl-3-(3,4-dimethoxy-phenyl)-propyl)-N-propyl-O-ethyl-hydroxylamine;

and the pharmaceutically acceptable salts thereof.

20 6. Pharmaceutical compositions containing one or more compounds of formula (I) as defined in claim 1 or 4 in a mixture with suitable excipients and/or carriers.

7. Pharmaceutical compositions containing one or more compounds of formula (I) as defined in claim 1 and a compound for the treatment of central 25 and peripheral nervous system disorders involving protein misfolding and/or misaggregation of beta-amyloid peptide, alpha-synuclein, prion protein and huntingtin selected from Alzheimer's Disease, Lewy body disease, Parkinson's Disease, spongiform encephalopathies, Huntington's Disease and

systemic AA amyloidosis, in admixture with suitable excipients and/or carriers.